

In re Patent Application of
KHOURI ET AL.
Serial No. 10/748,696
Filed: DECEMBER 30, 2003

In the Claims:

This listing of claims replaces all prior versions and listing of claims in the application.

Claims 1-12 (cancelled).

13. (Currently amended) A non-volatile memory device comprising:

a memory cell matrix including a plurality of sectors; and

a remapping circuit for remapping defective sectors of the memory cell matrix, defective sectors comprising sectors having at least one defective cell, the remapping circuit comprising a content addressable memory (CAM) unit for detecting defective sectors of the memory cell matrix and including

first memory elements containing defective sector addresses, and

corresponding second memory elements containing replacement sector addresses;

a multiplexer unit connected downstream from and in data communication with said CAM unit, and associated to and in data communication with the memory cell matrix;

said CAM unit activating said multiplexer unit to replace defective sector addresses with replacement sector addresses when defective sectors of the memory cell matrix are detected.

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Claims 14-16. (cancelled).

17. (Currently amended) A non-volatile memory device according to Claim 13 ~~16~~, wherein said CAM unit comprises a non volatile memory.

18. (Currently amended) A non-volatile memory device according to Claim 13 ~~16~~, wherein said CAM unit comprises a volatile memory which is activated when the memory device is activated.

19. (Previously presented) A non-volatile memory device according to Claim 13, wherein the plurality of sectors comprises a higher number of sectors than a nominal capacity of the memory device.

Claims 20-26. (Cancelled).

27. (Previously presented) A method for restoring a non-volatile memory including a memory cell matrix having memory cells divided into a plurality of sectors, the method comprising:

detecting defective sectors of the device memory cell matrix with a content addressable memory (CAM) unit, the defective sectors comprising sectors having at least one defective memory cell;

storing an address of the defective sector in first memory elements of the CAM unit; and

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providing a pre-programmed replacement sector
address in second memory elements of the CAM unit, the
replacement sector address corresponding to ~~of~~ a replacement
sector to replace the defective sector with the replacement
sector among the plurality of sectors of the memory cell
matrix;

the CAM unit activating a multiplexer unit in data
communication with the memory cell matrix to replace defective
sector addresses with replacement sector addresses when
defective sectors of the memory cell matrix are detected.

28. (Currently amended) A method according to Claim
27, wherein the CAM unit comprises a non volatile memory
~~detecting a defective sector comprises detecting with a sector~~
~~remapping circuit.~~

29. (Currently amended) A method according to Claim
28, wherein the CAM unit comprises a volatile memory which is
activated when the memory device is activated ~~the sector~~
~~remapping circuit comprises a content addressable memory (CAM)~~
unit.

Claims 30-34. (Cancelled).